

Razer 2.4GHz Antenna Report

2024/08/28

Presented by: Luxshare Antenna Team



Agenda:



- 1. Antenna Environment**
- 2. Antenna test Environment**
- 3. Antenna VSWR & 3D Passive Gain :**
- 4. 2D Radiation pattern**
- 5. Conclusion**

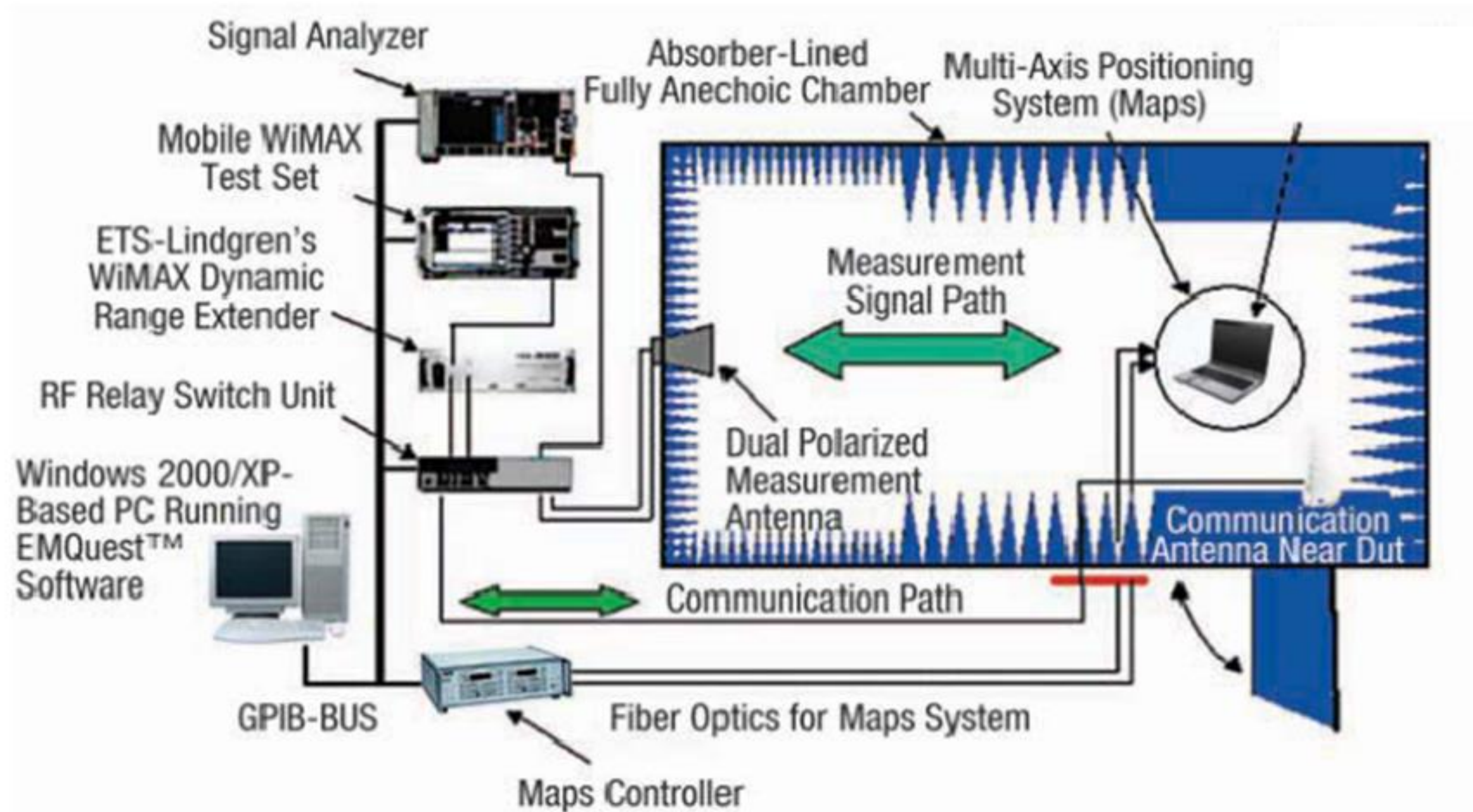
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Item	Note
Antenna clearance area	25 x 8 mm
Ant Pattern	15 x 8 mm
Cable length	OD1.13_50mm

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2.4GHz Antenna :

- test Environment : ICT ETS8500 Chamber



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2.4GHz Antenna :

- test Environment : ICT ETS8500 Chamber



The device is placed in the air

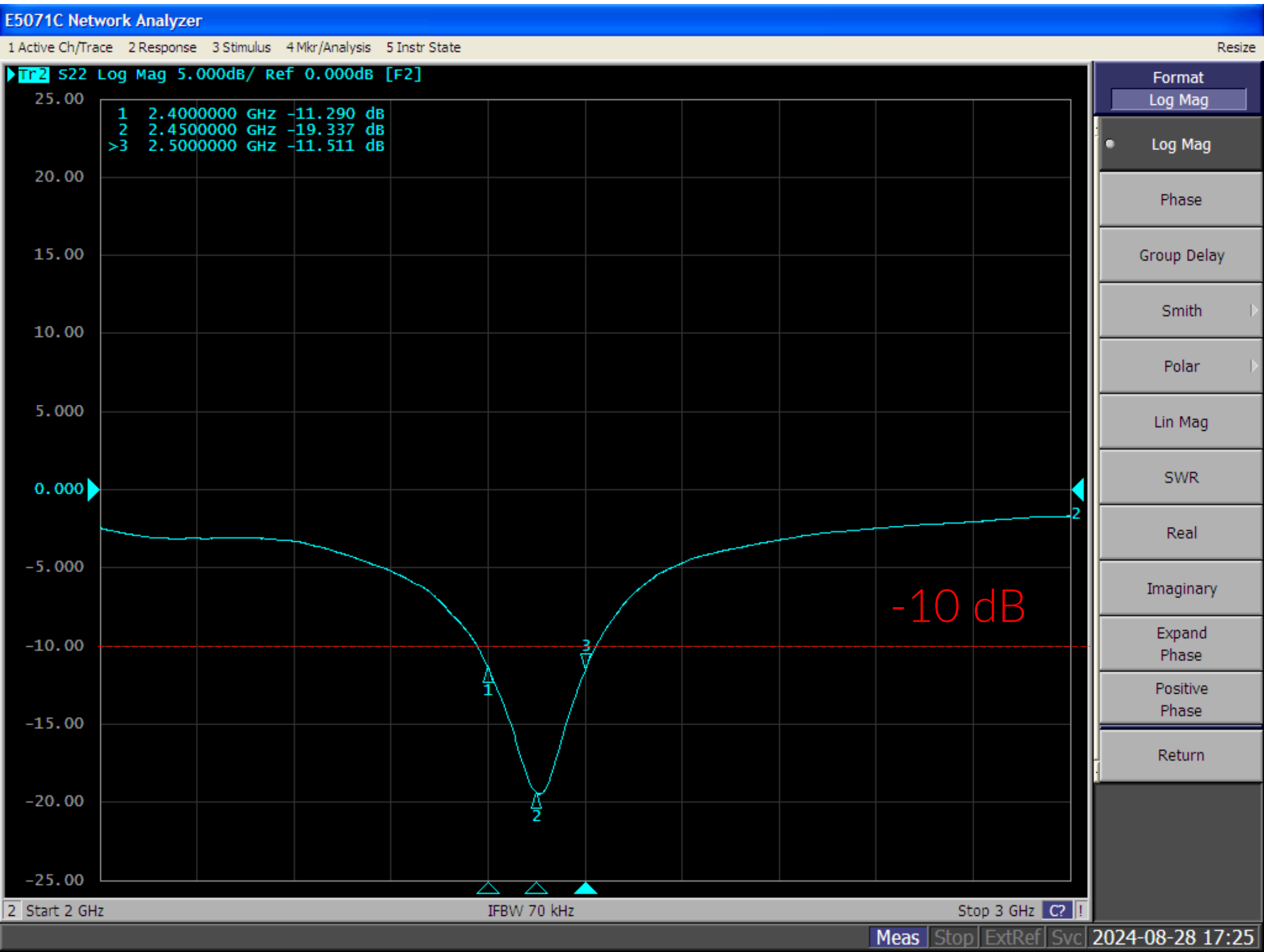


The device is placed on metal

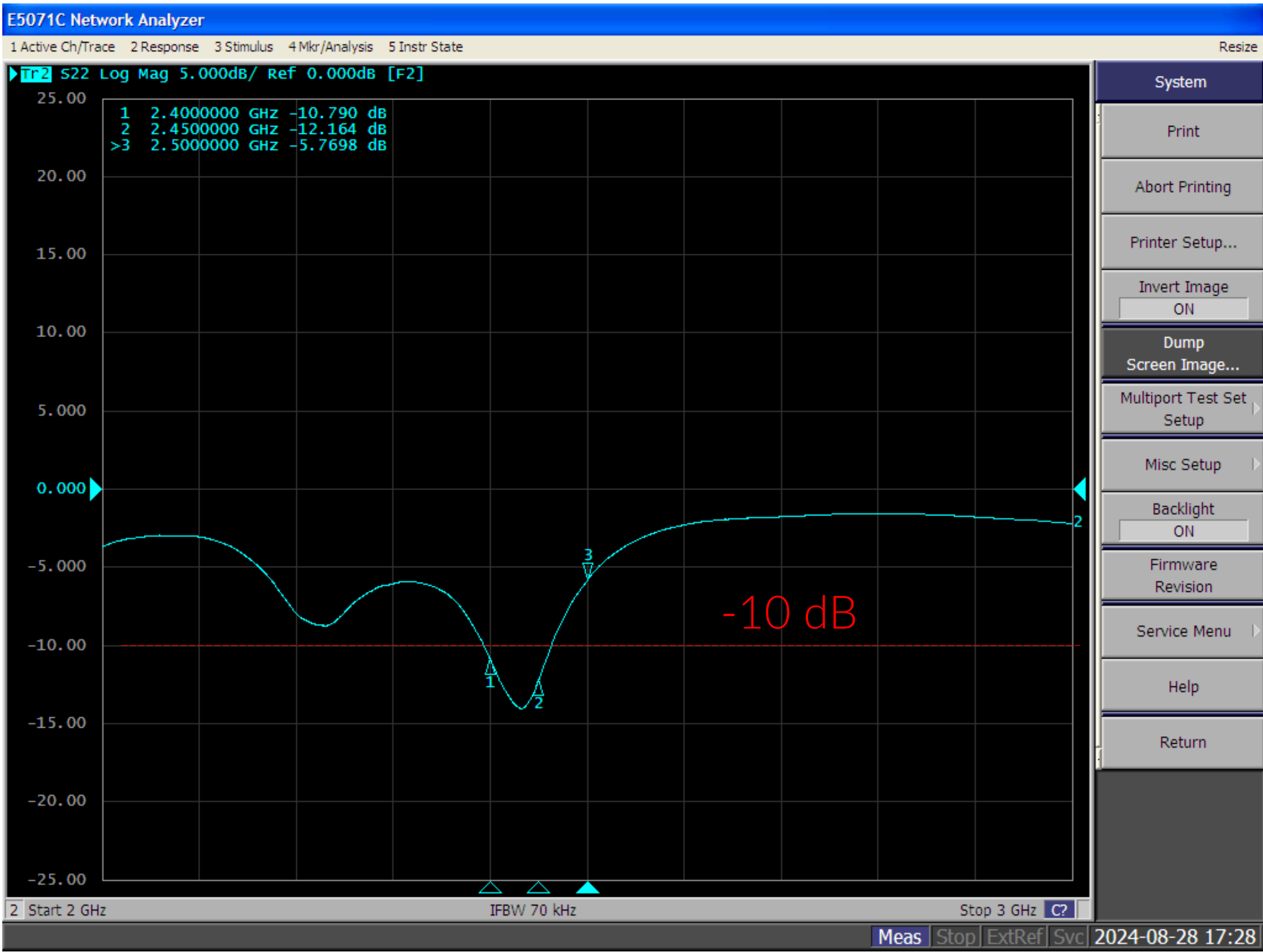
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2.4GHz Antenna :

- Antenna S11 :



The device is placed in the air



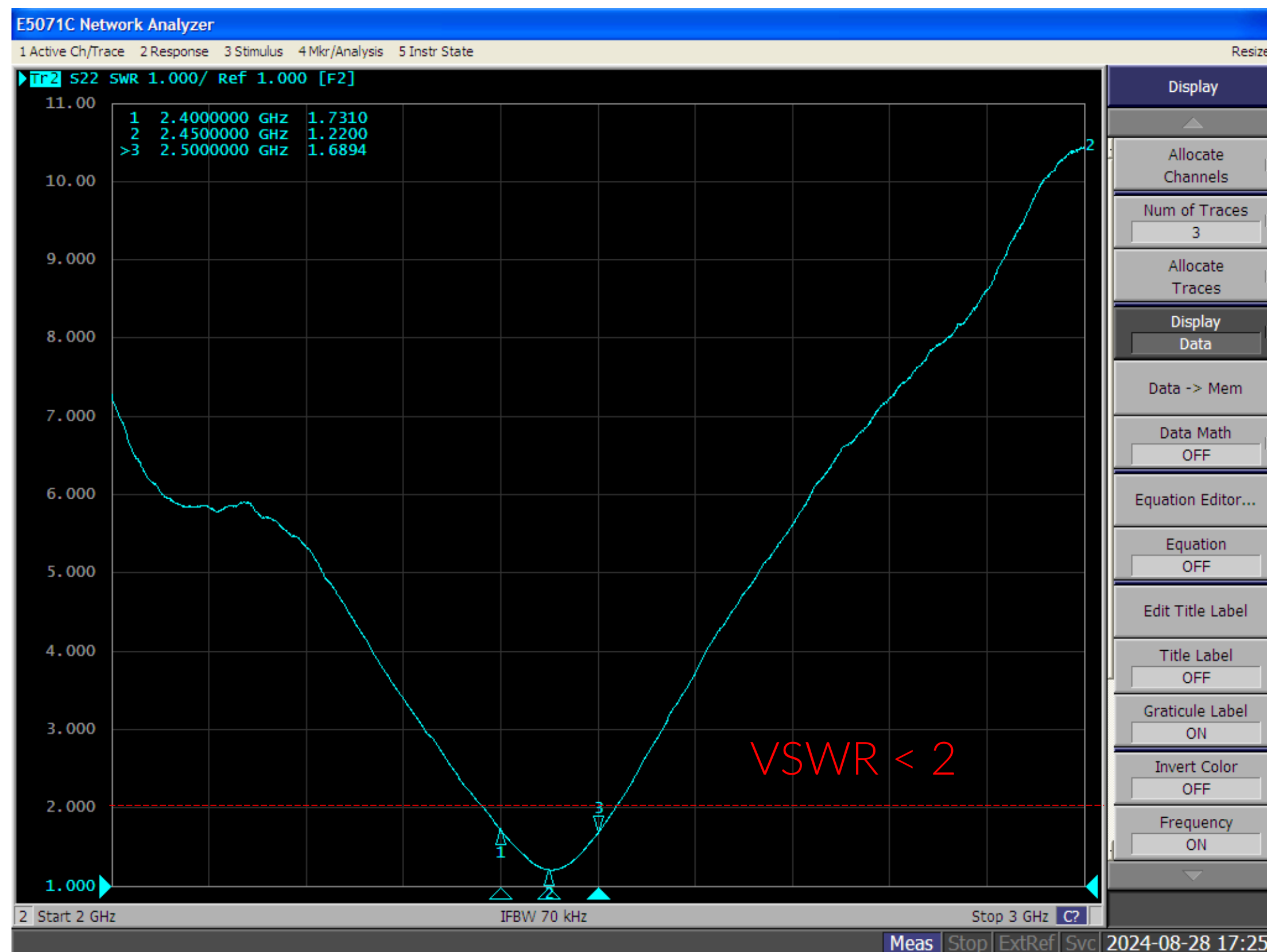
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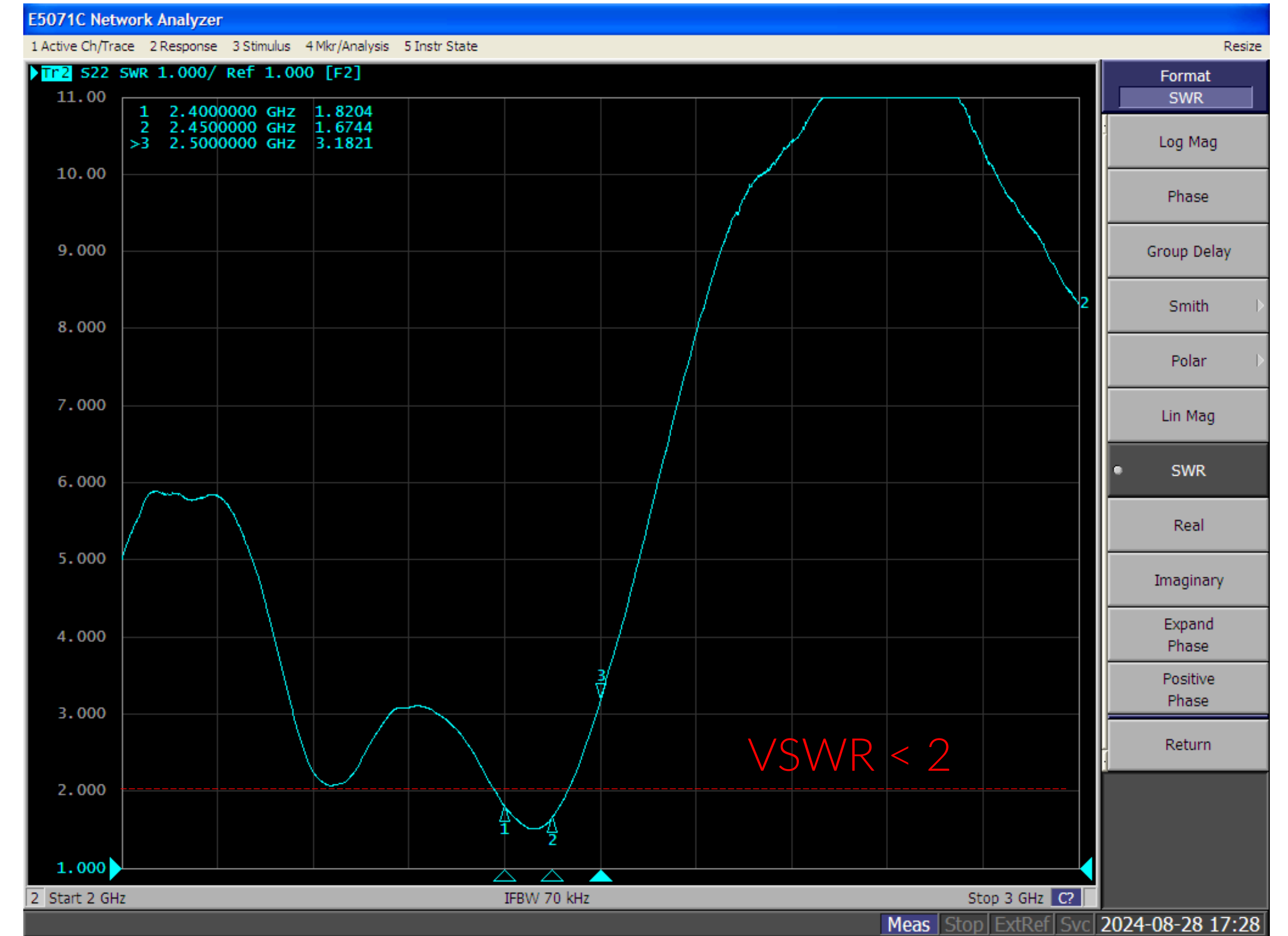
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2.4GHz Antenna :

- Antenna VSWR :



The device is placed in the air



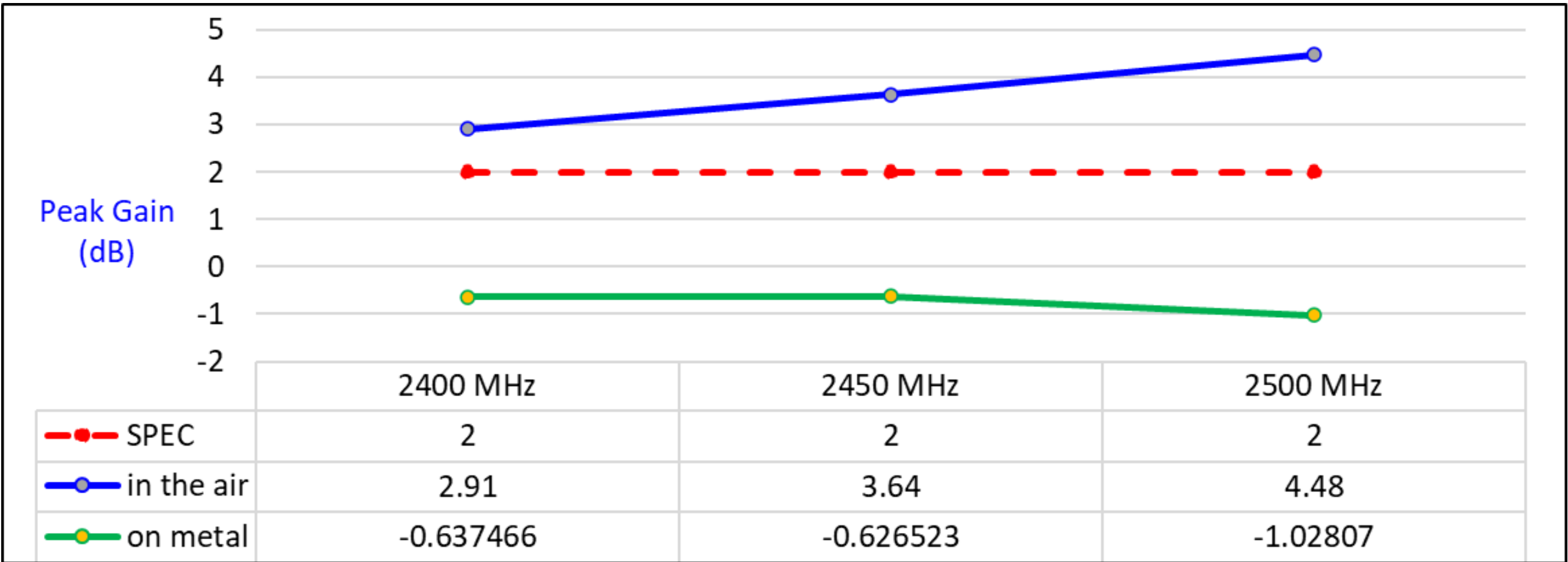
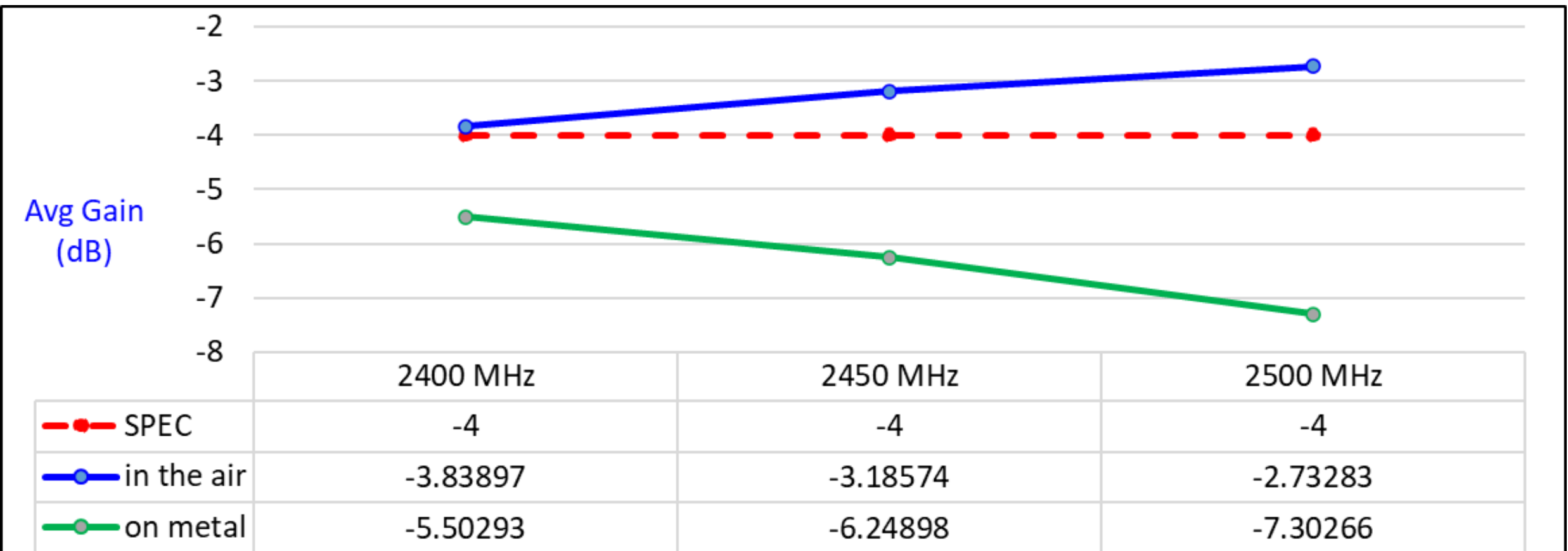
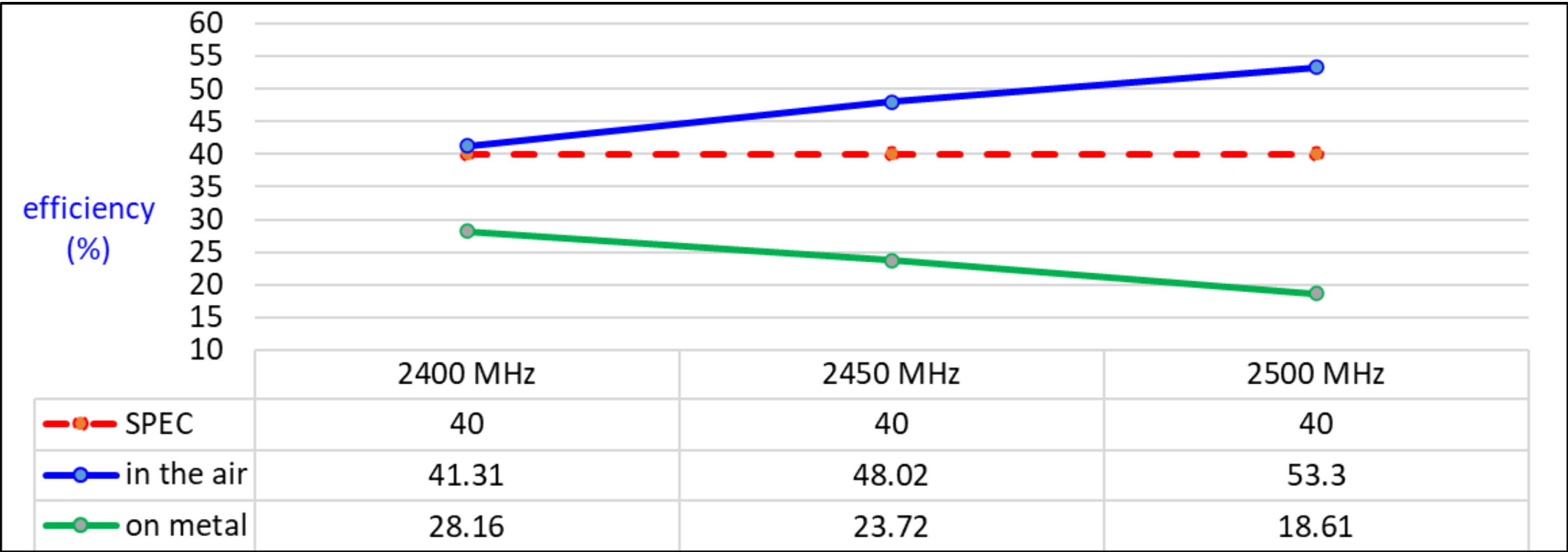
The device is placed on metal

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2.4GHz Antenna :

- 3D Passive Gain :

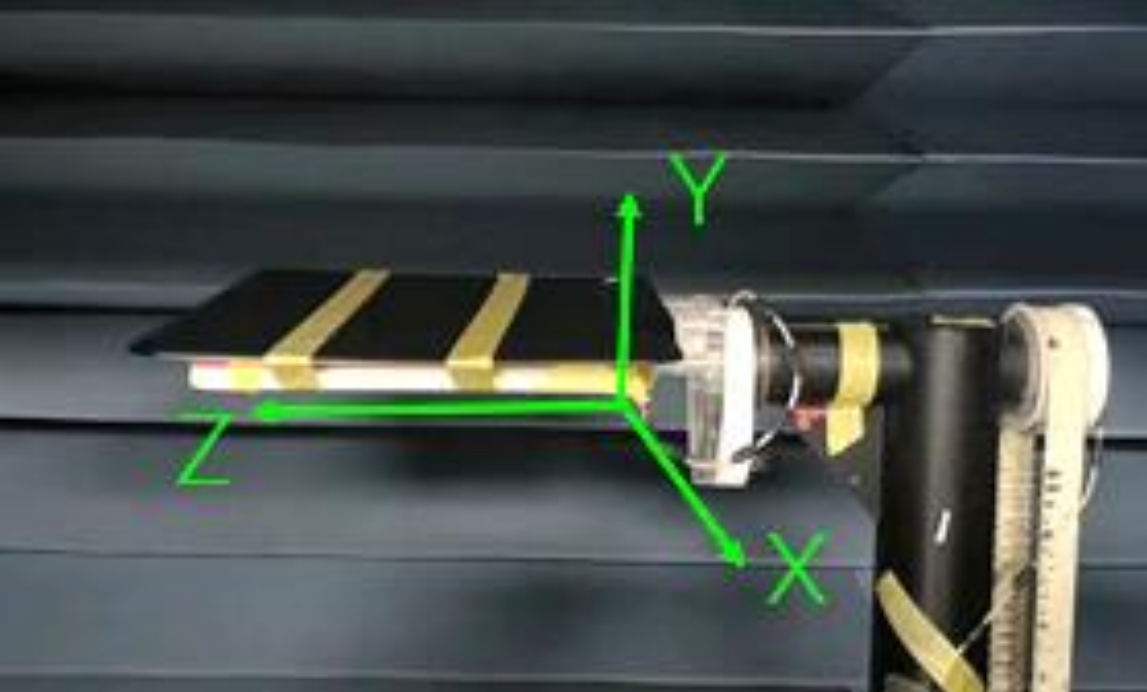
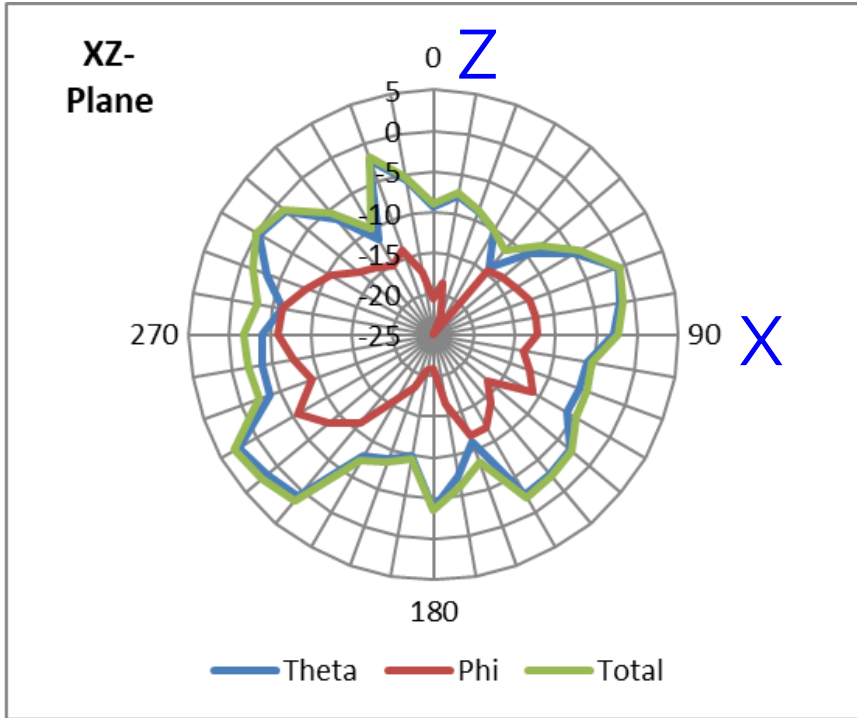
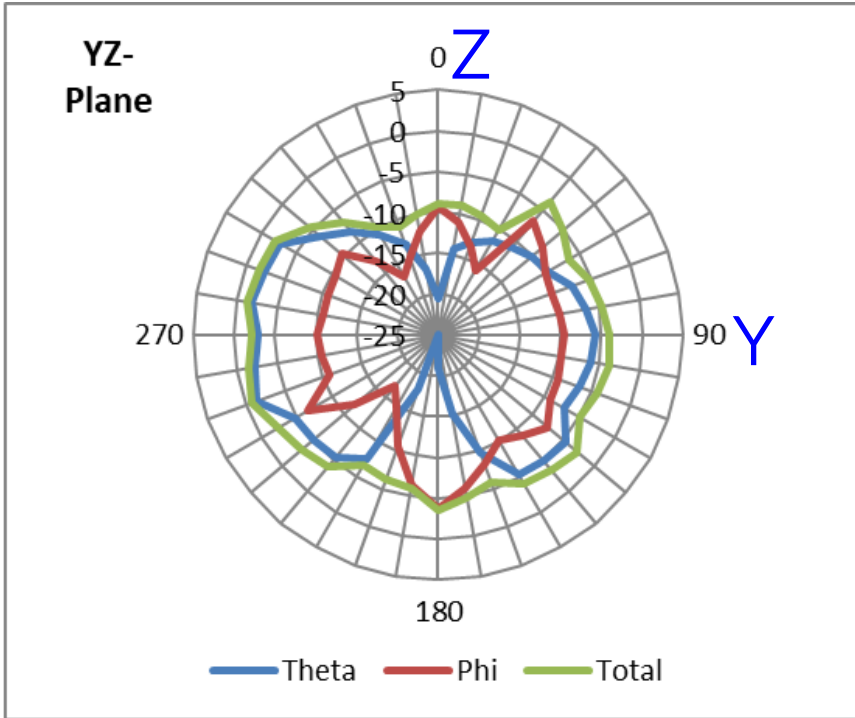
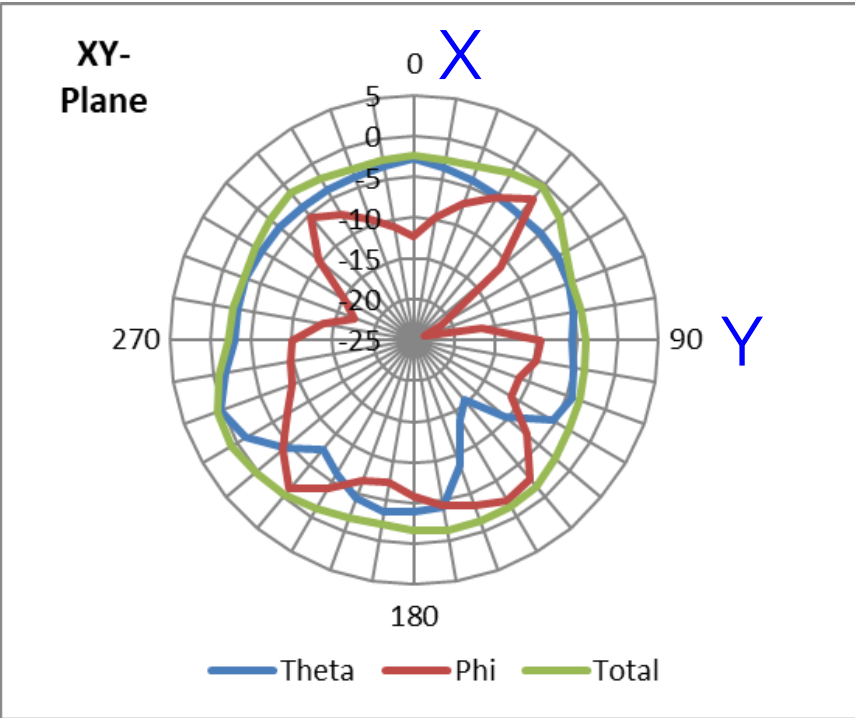


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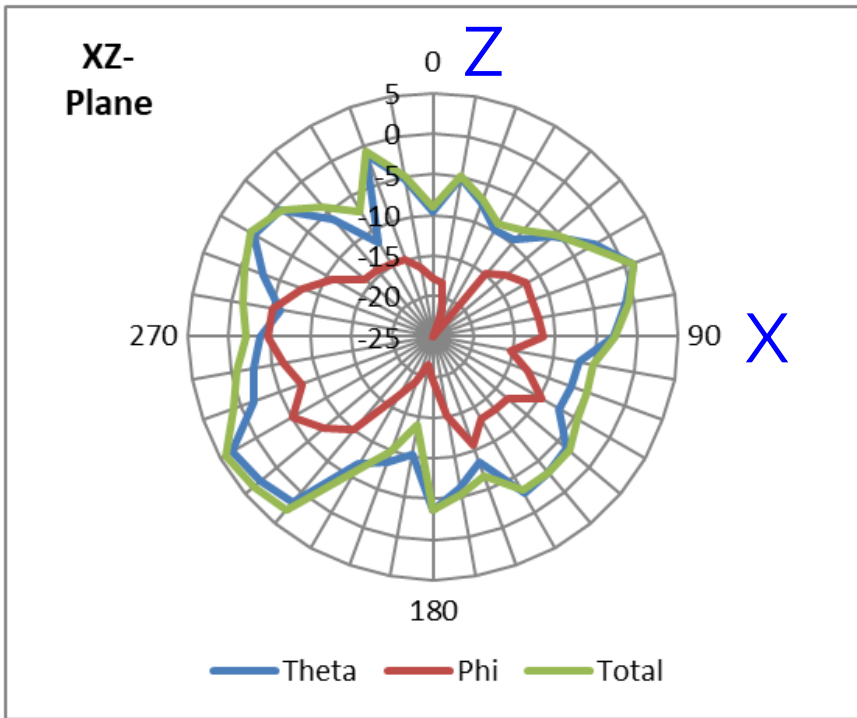
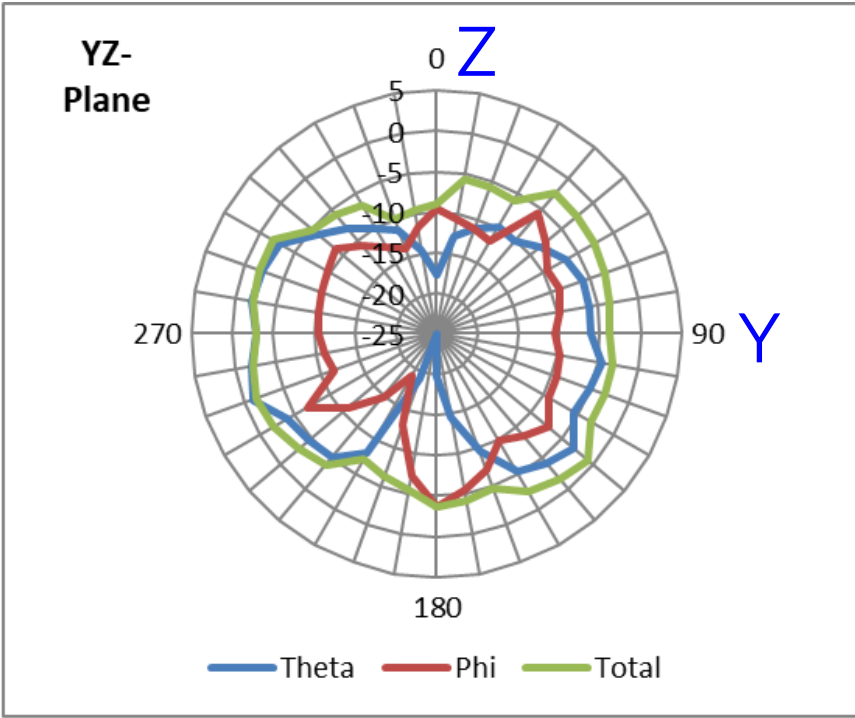
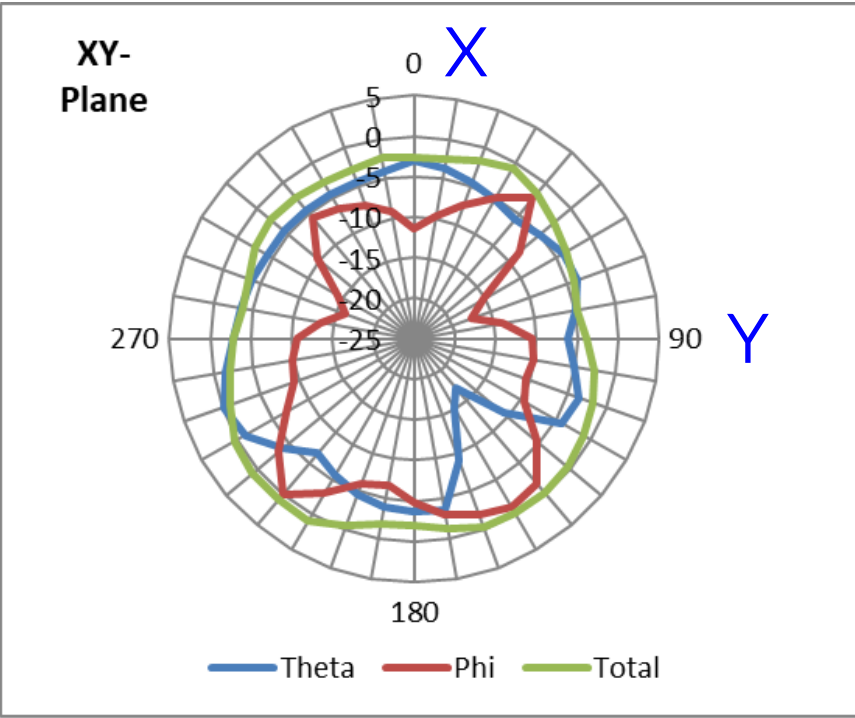
2.4GHz Antenna :

- 2D Radiation pattern :

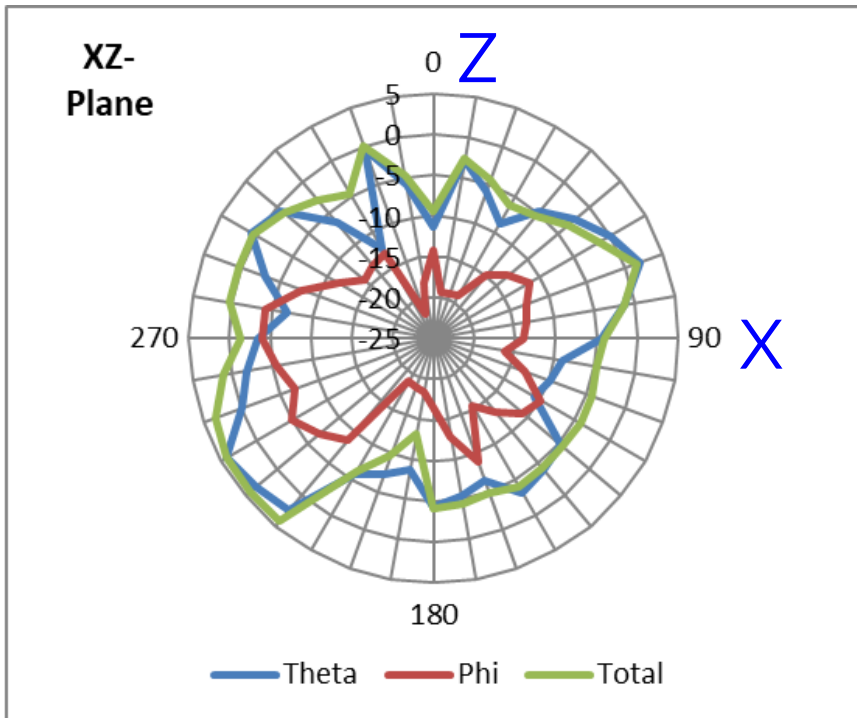
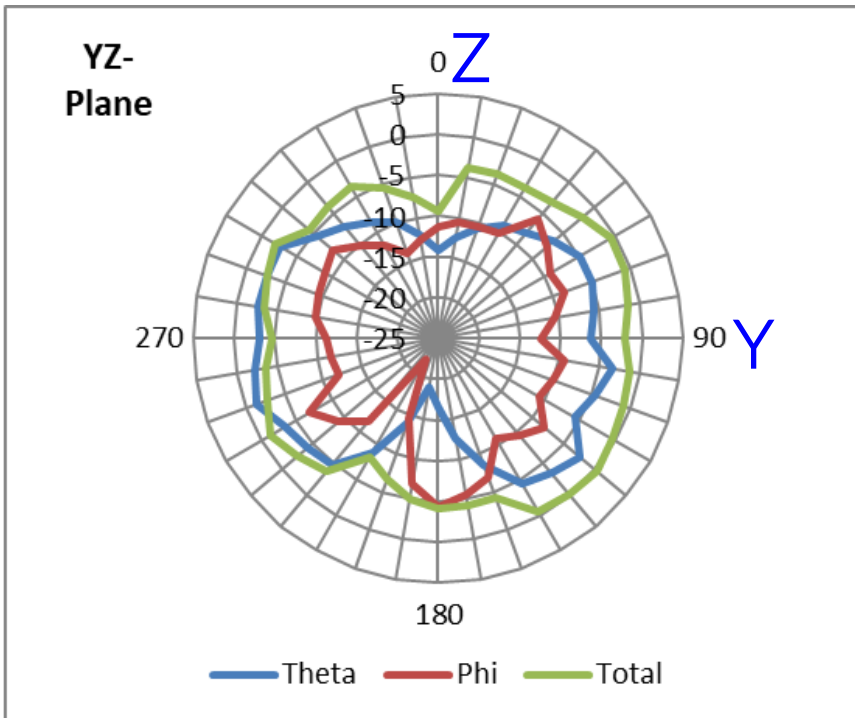
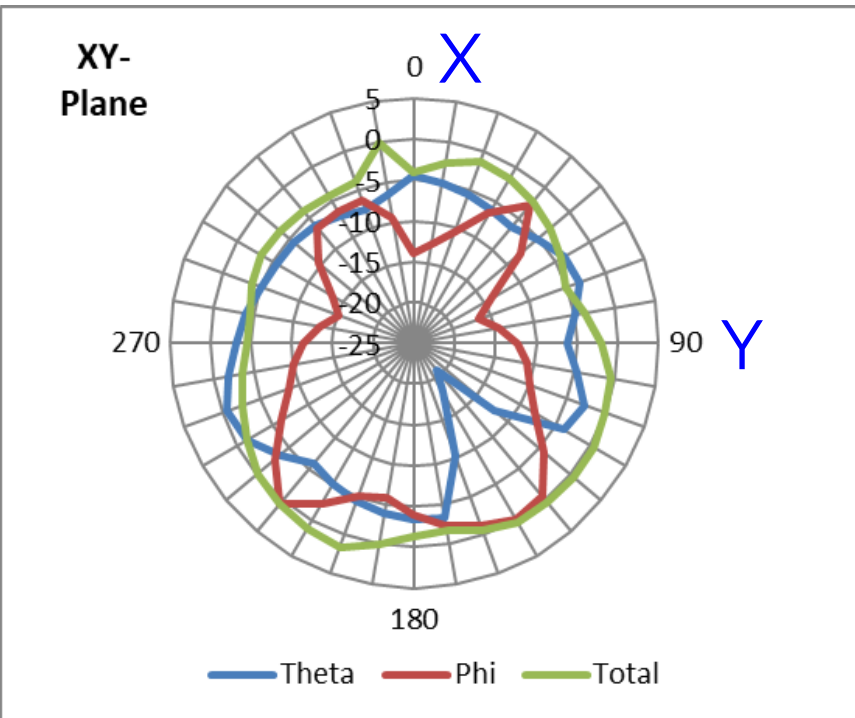
2400 MHz



2450 MHz



2500 MHz

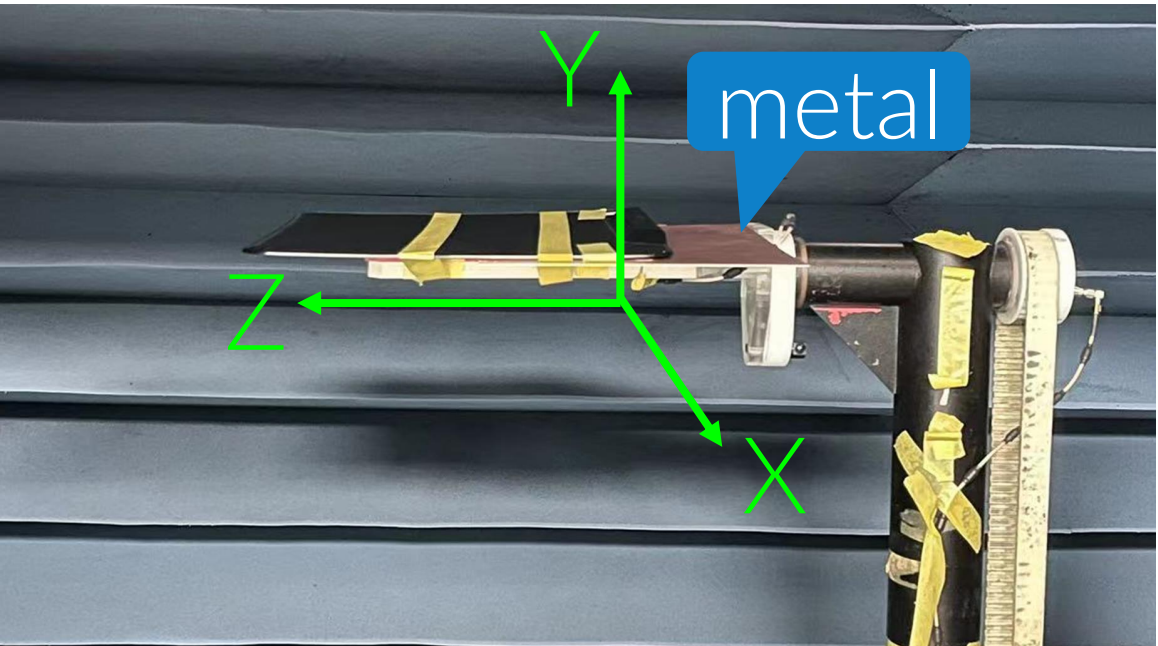
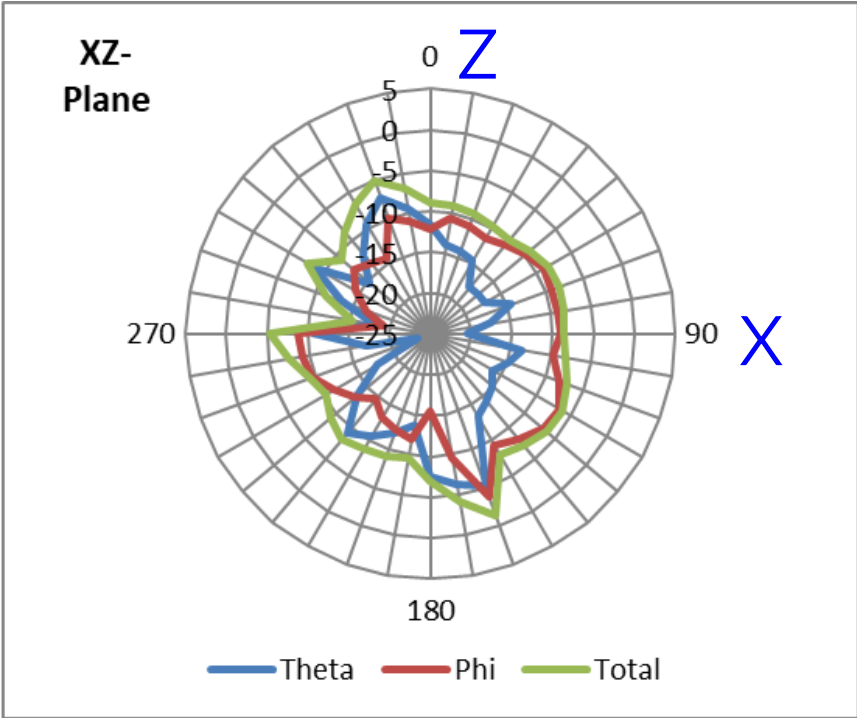
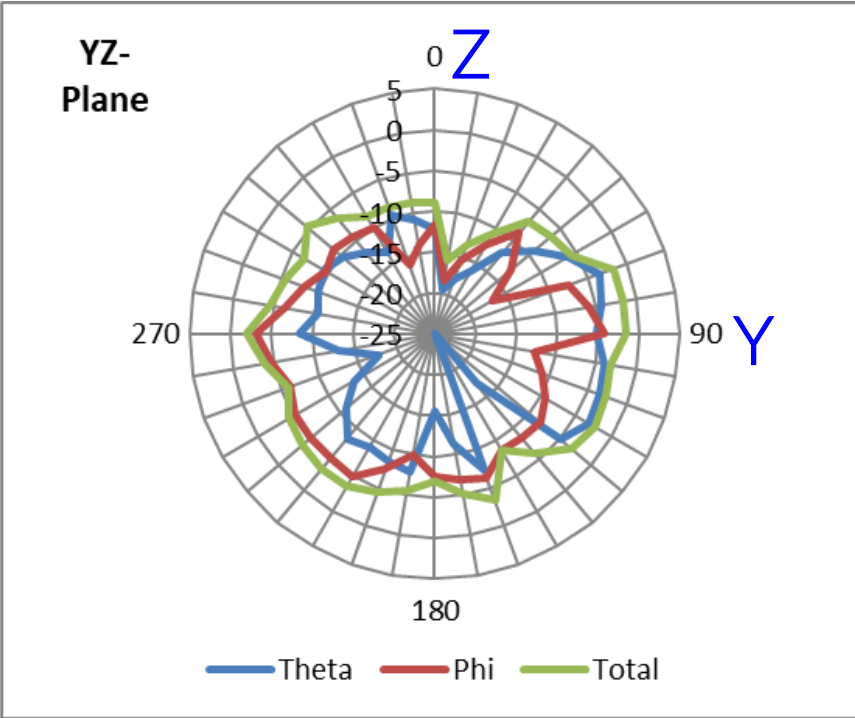
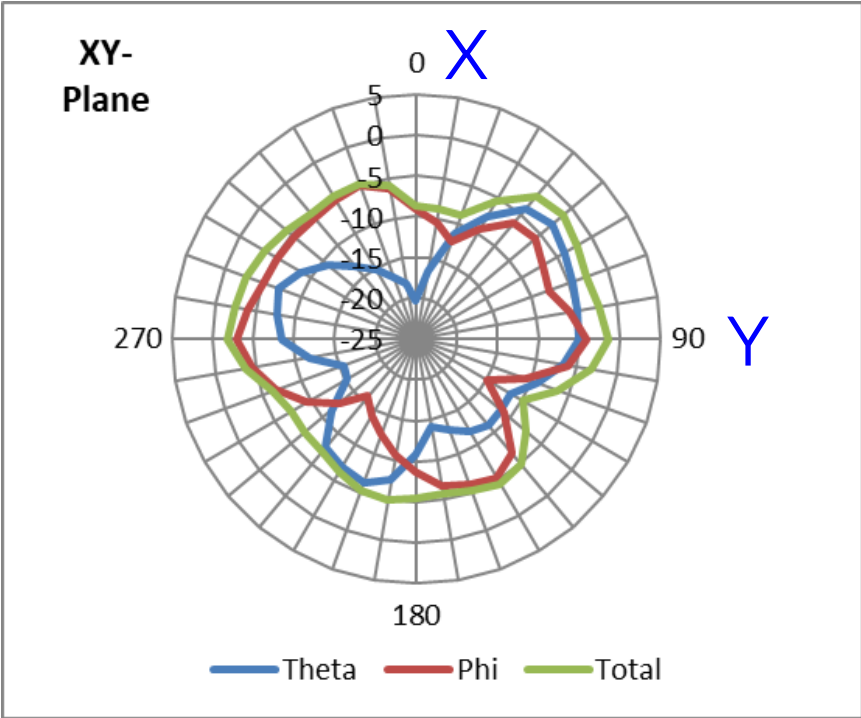


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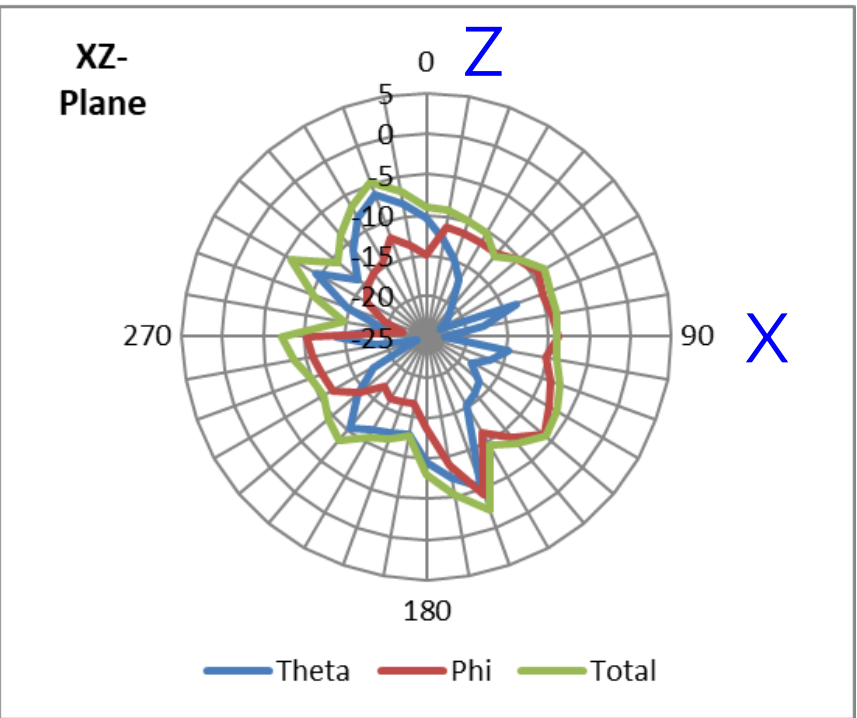
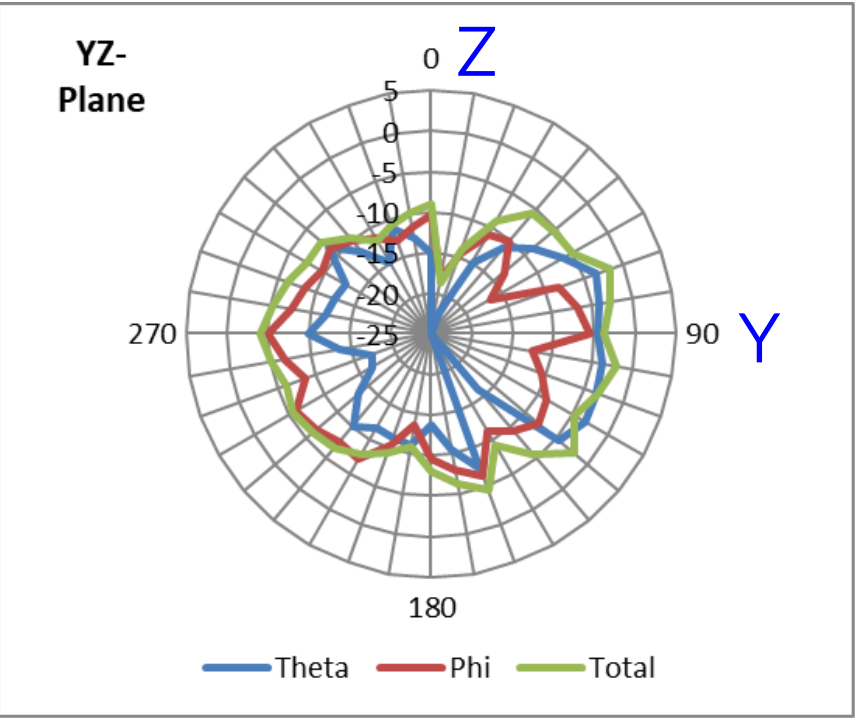
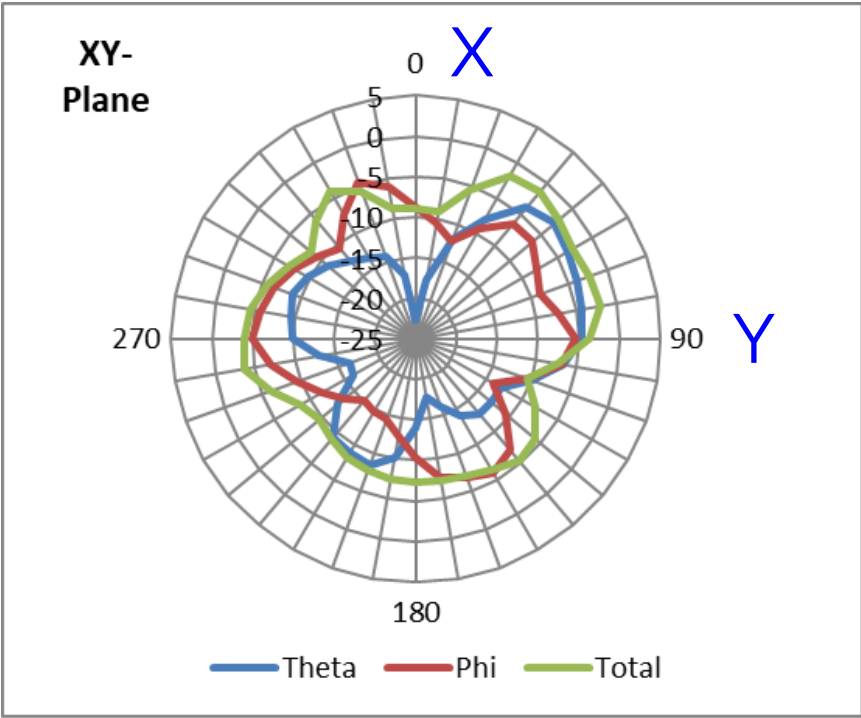
2.4GHz Antenna :

- 2D Radiation pattern :

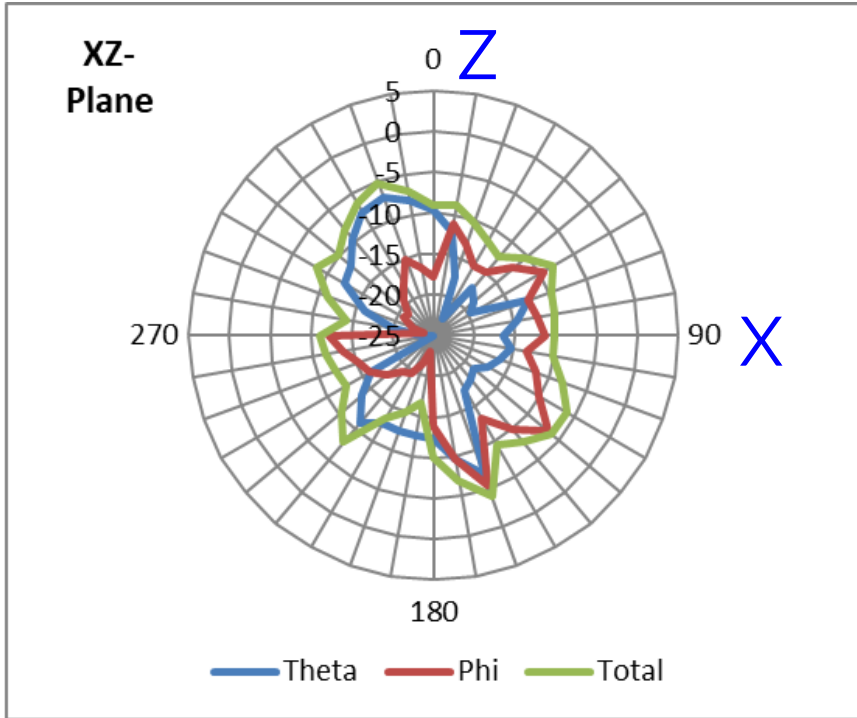
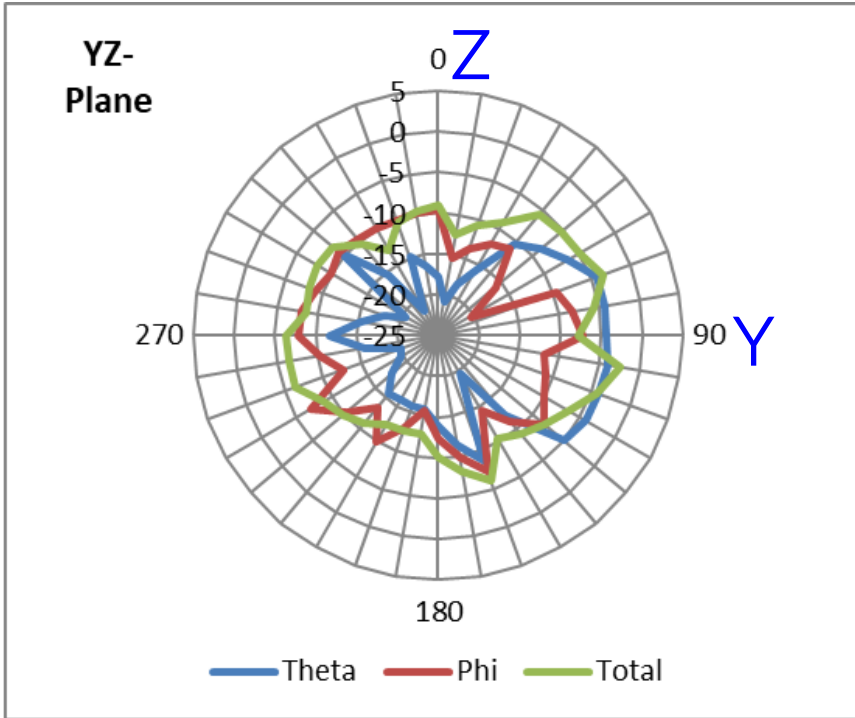
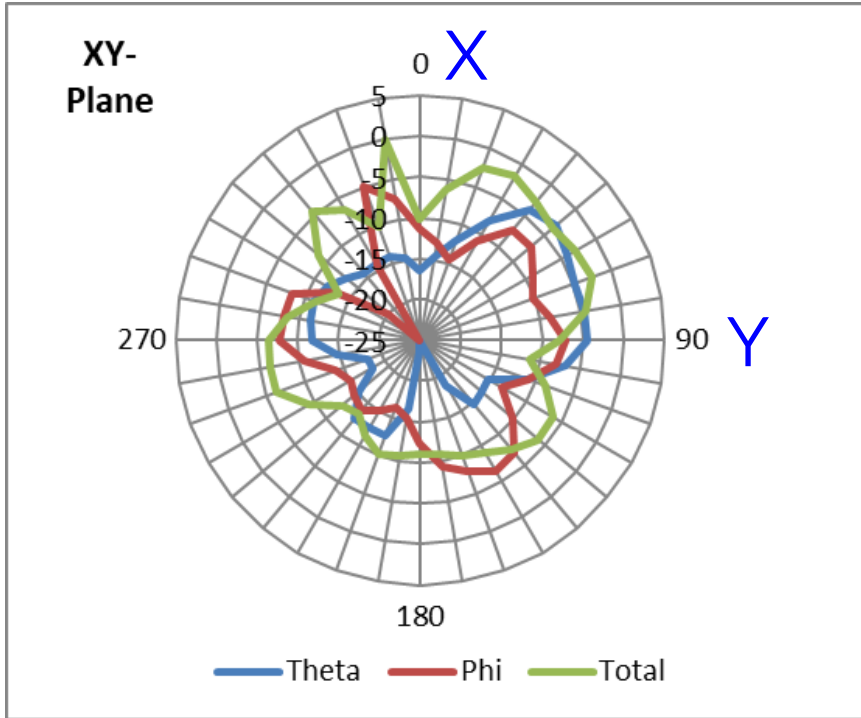
2400 MHz



2450 MHz



2500 MHz

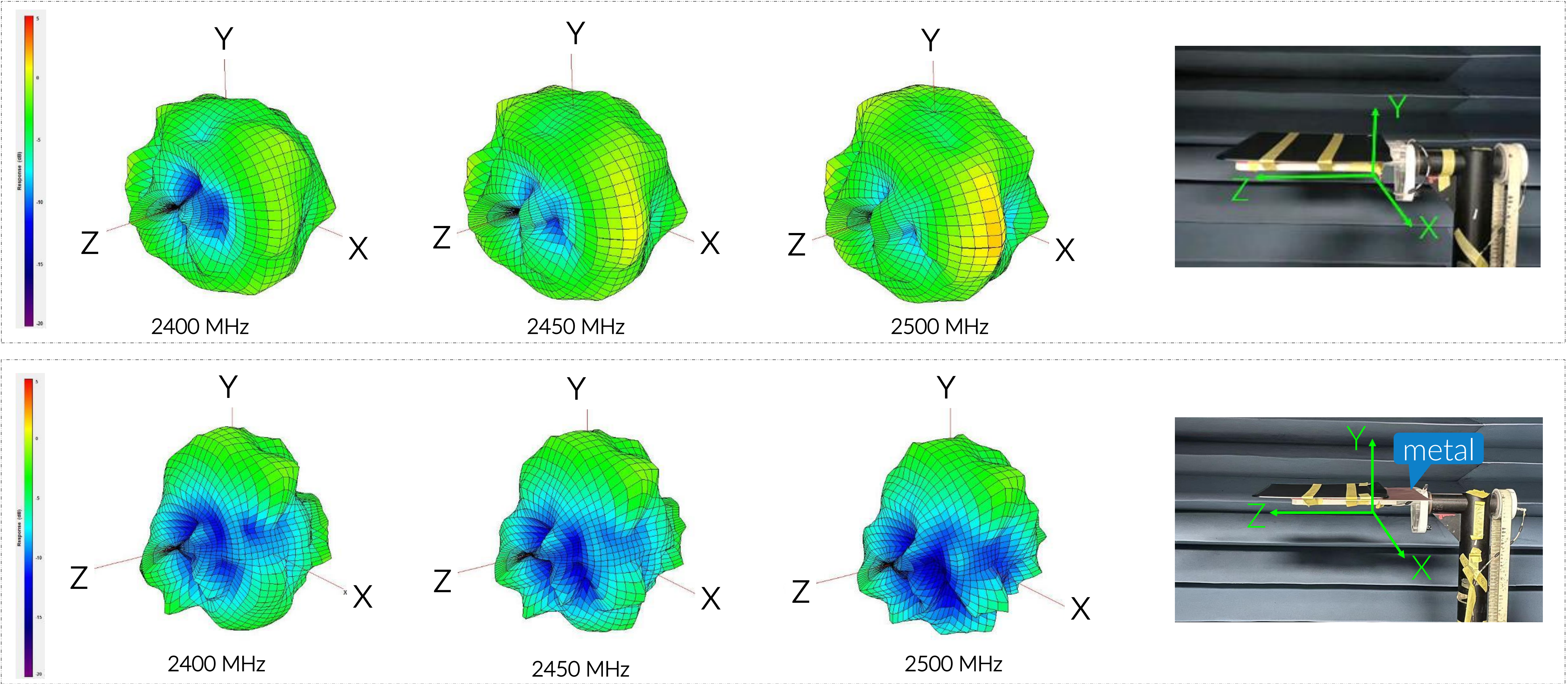


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2.4GHz Antenna :

- 3D Radiation pattern :



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2.4GHz Antenna :

- Conclusion :

1. 使用PCB 板模擬天線環境，測試結果被動效能 2.4GHz 平均增益大約-3.5 dB左右，效率約為45%。
2. 實驗加上了金屬桌面，測試結果被動效能 2.4GHz ~2.5GHz 平均增益大約下降4dB左右。
3. 為了方便測試，天線是採用Coaxial Cable 饋入，線長設定為50mm。
4. 此報告僅說明待測物測試結果。